



Lenovo N21 Chromebook Motherboard and Camera Replacement

Replace your Chromebook's motherboard and camera to resume productive work on your device.

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INTRODUCTION

All of the processing power of the Lenovo N21 Chromebook comes from its motherboard. In order to fix issues with the RAM, hard drive, CPU, or graphics, the whole motherboard may need replacement. In order to replace the motherboard or the camera, you will need to replace both pieces because they are connected.

Be careful when dealing with the motherboard. It is very sensitive due to its small parts. When removing it, take extra care not to touch the CPU because oil from fingers may damage the piece.



TOOLS:

- [Phillips #00 Screwdriver](#) (1)
 - [iFixit Opening Tools](#) (1)
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Step 1 — Keyboard and Trackpad Panel



- ⚠ Power down the Chromebook before starting any repair.
- ⚠ Opening up your Chromebook voids the manufacturer warranty.
- Use a screwdriver to remove the six 5.0mm Phillips screws from the bottom housing of the Chromebook.

Step 2



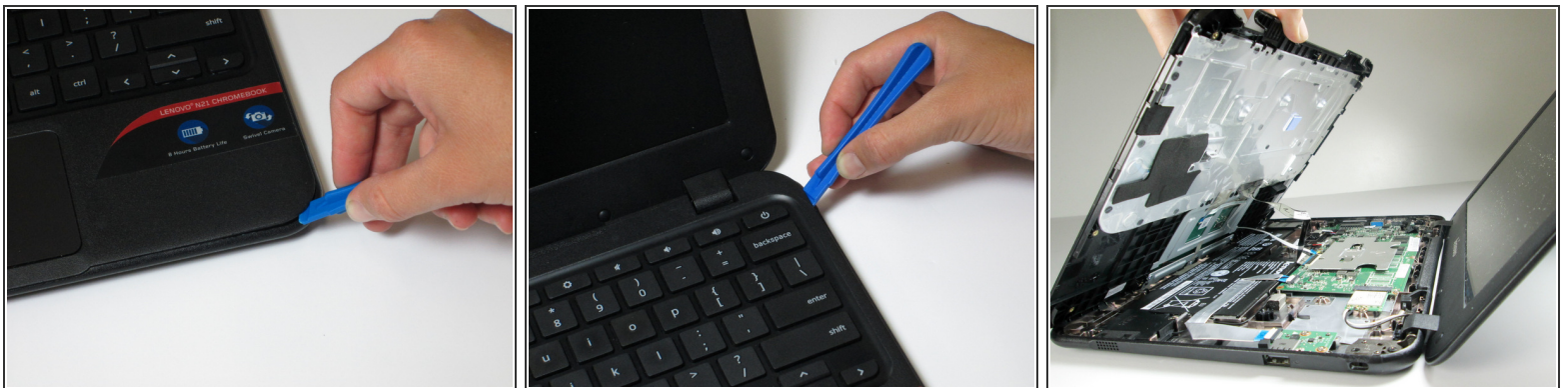
- Use a plastic opening tool to pry off the four rubber pegs from the bottom housing.

Step 3



- Use a screwdriver to remove the four 5.0mm Phillips screws located under the rubber soles.

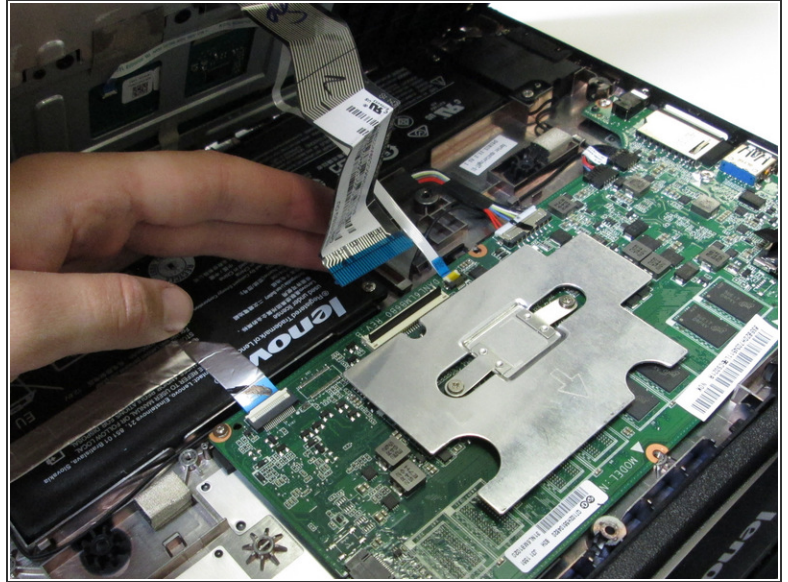
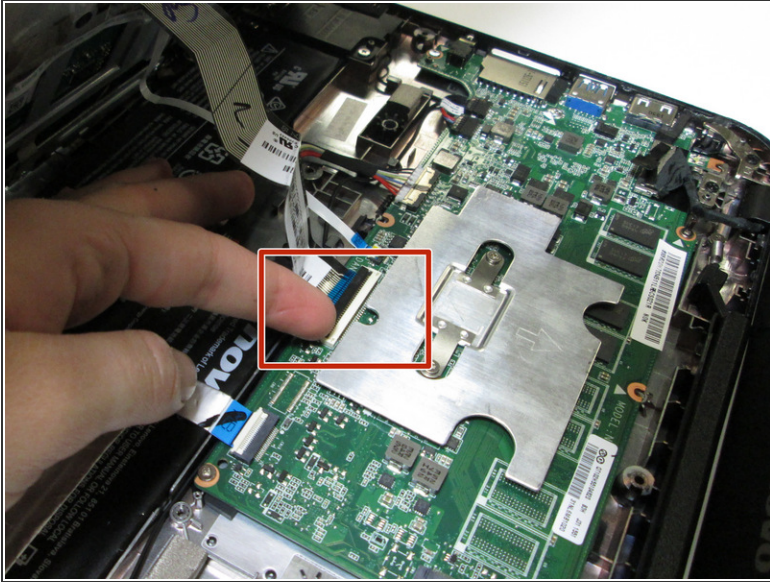
Step 4



- Flip the laptop over and open the screen.
- Gently pry the keyboard and trackpad panel away from the bottom housing using a plastic opening tool.

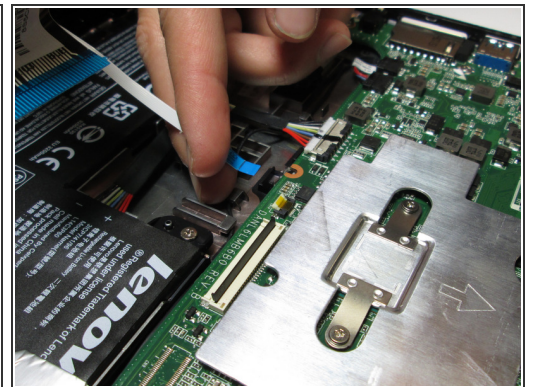
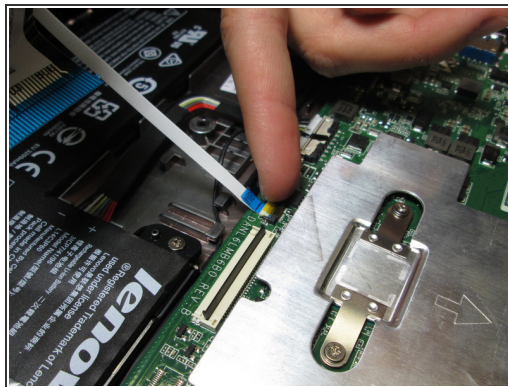
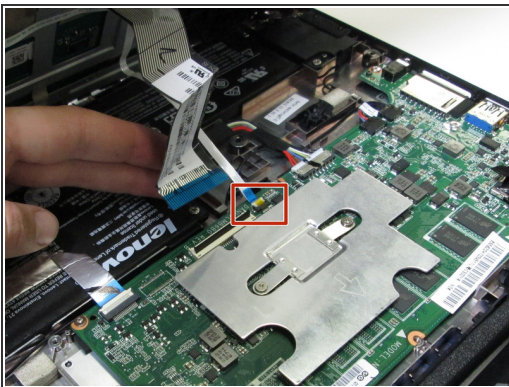
⚠ Once completely separated, do not immediately pull the panel completely away from the bottom housing. There are wires that are still connecting the panel to the rest of the internals of the Chromebook.

Step 5



- Disconnect the keyboard ribbon cable by lifting the ZIF connector lock with a plastic opening tool or fingernail and gently pulling the ribbon cable straight out of its socket.

Step 6



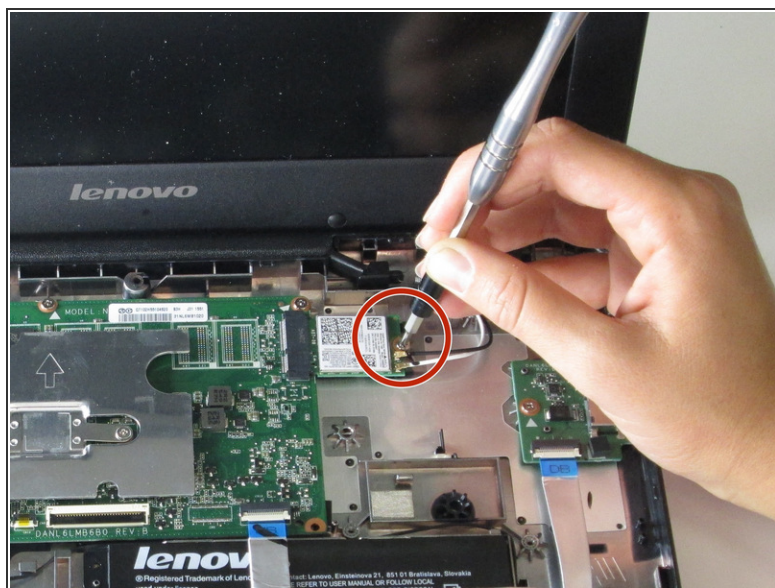
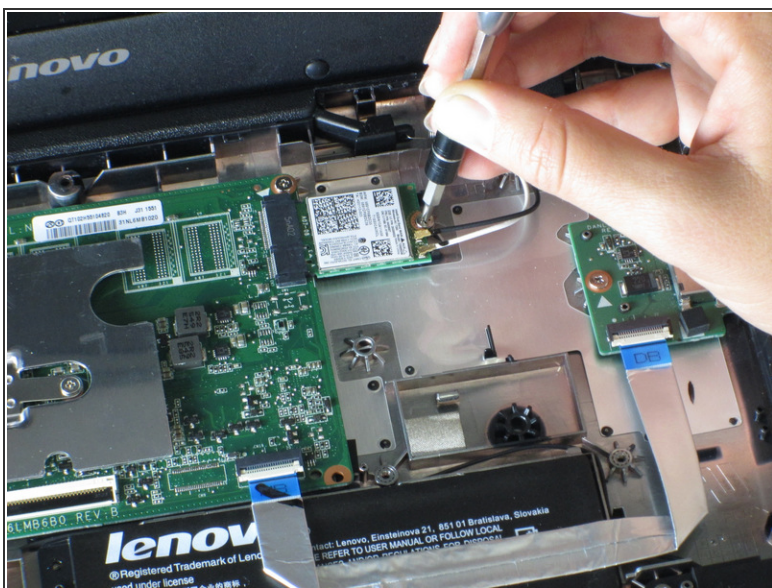
- Disconnect the trackpad ribbon cable by lifting the ZIF connector lock with a small prying tool or fingernail and gently pulling the ribbon cable straight out of its socket.

Step 7



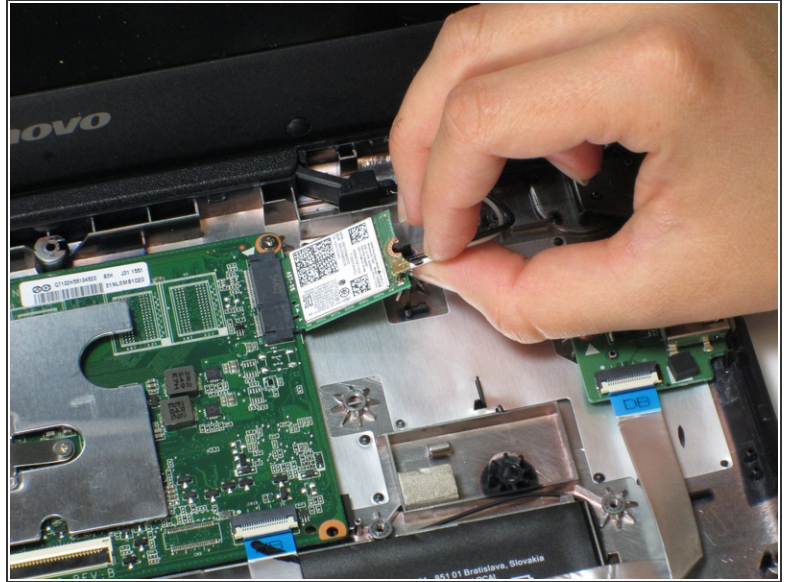
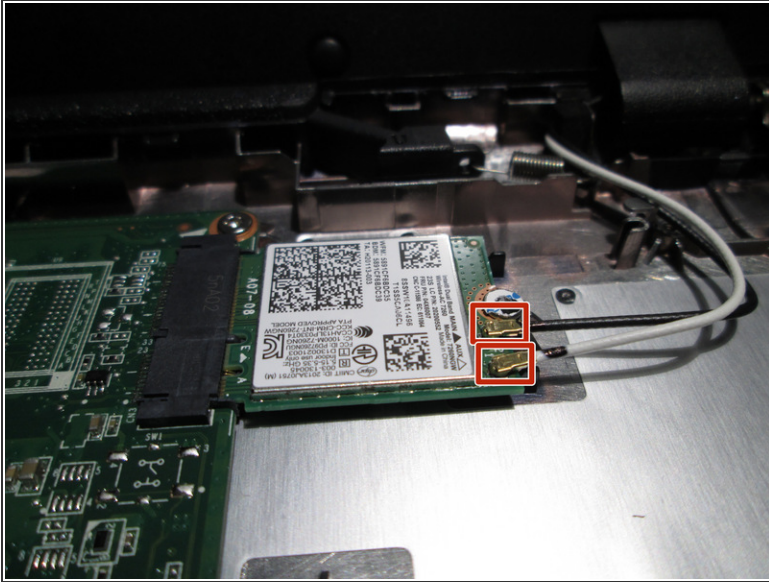
- Remove the keyboard and trackpad panel away from the device.

Step 8 — WiFi Card



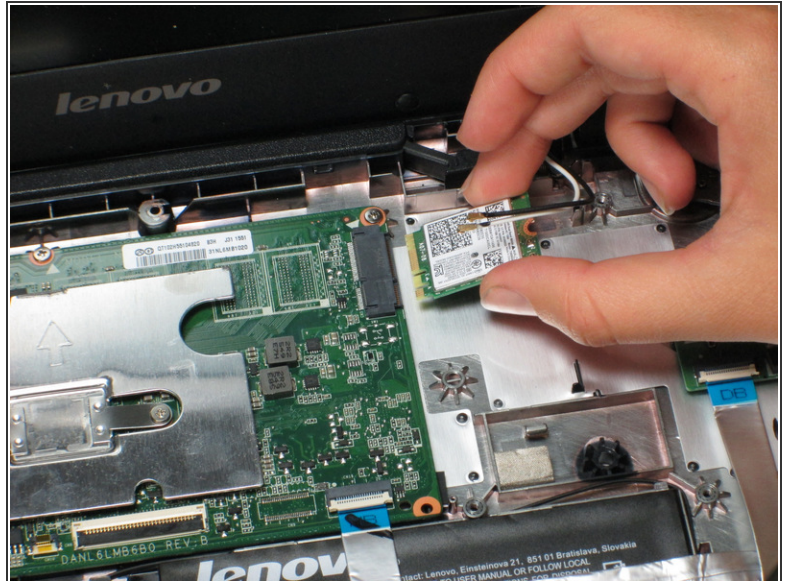
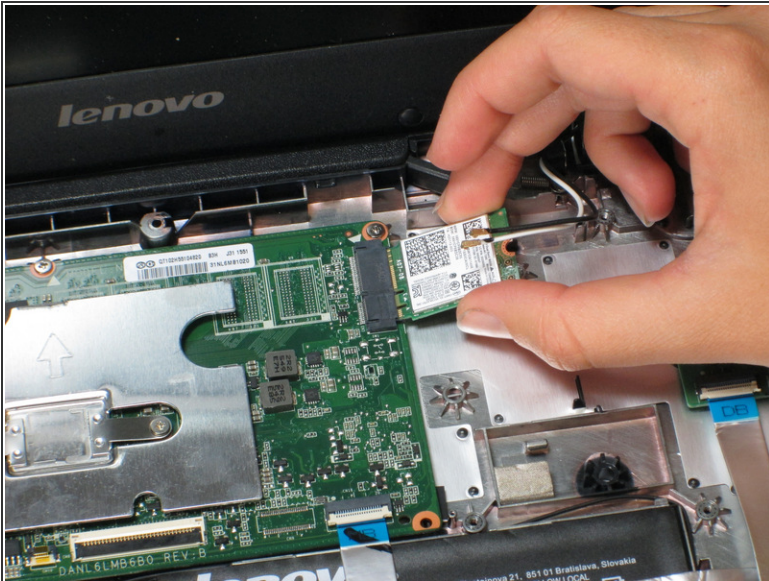
- Use a screwdriver to remove the single 3mm Phillips screw that is holding the WiFi card in place.

Step 9



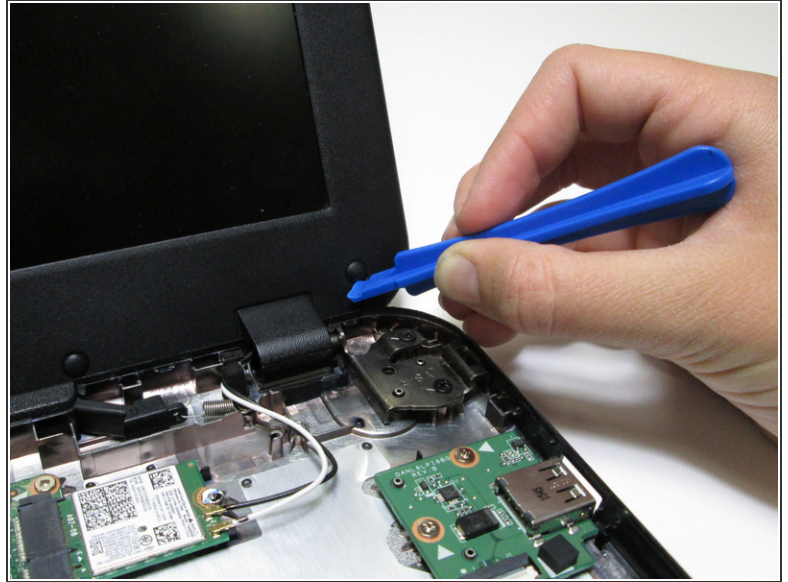
- Remove the black and white wires attached to WiFi card by gently lifting them upwards.
- ☑ When re-attaching the wires, make sure they are in the correct placement. You do not want to switch the black and white wires.

Step 10



- Remove the WiFi card by pulling it straight out of its connector.
- ⓘ Keep the WiFi card horizontal and pull straight back to avoid causing the part harm.

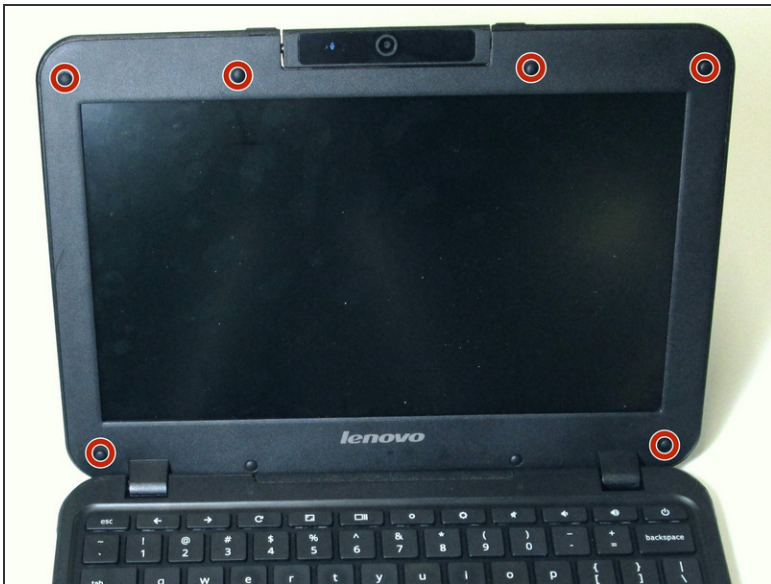
Step 11 — Screen



- Carefully pry off the six small rubber pads around the screen with a plastic opening tool to expose the screws.

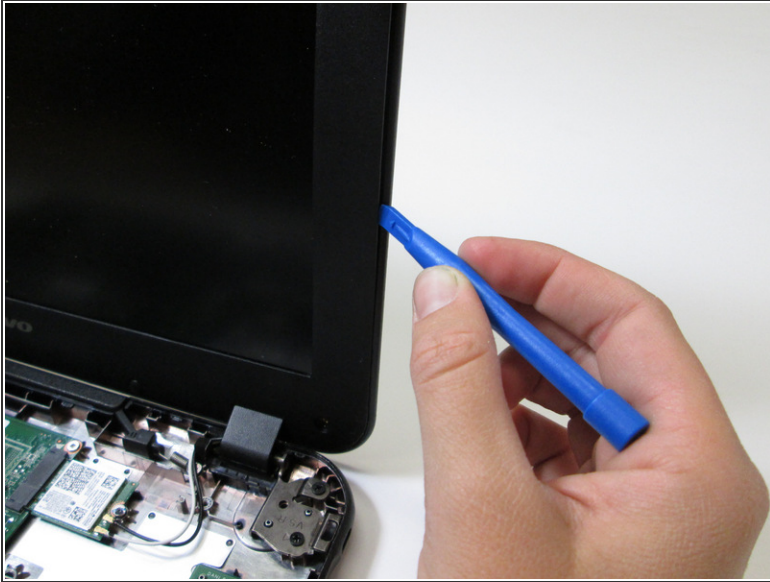
i There are two rubber pads without screws underneath that do not need to be removed.

Step 12



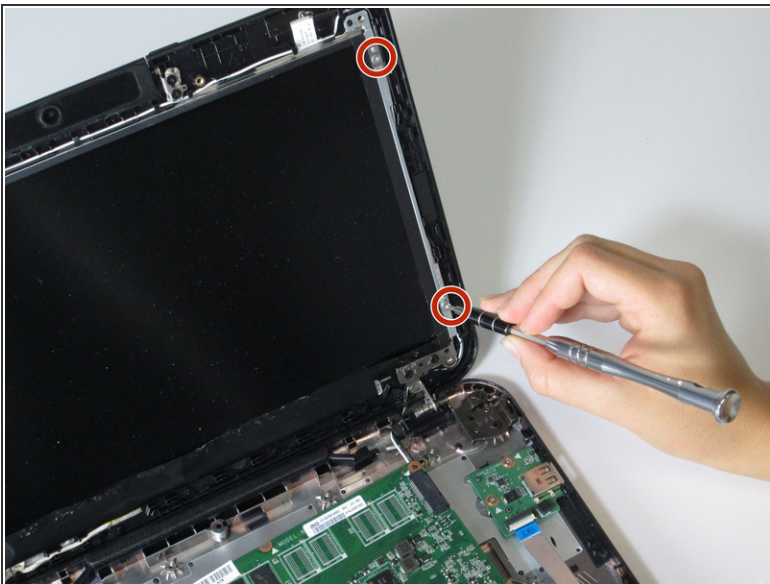
- Remove the six 4.0mm Phillips screws that are underneath the rubber pads with a screwdriver.

Step 13



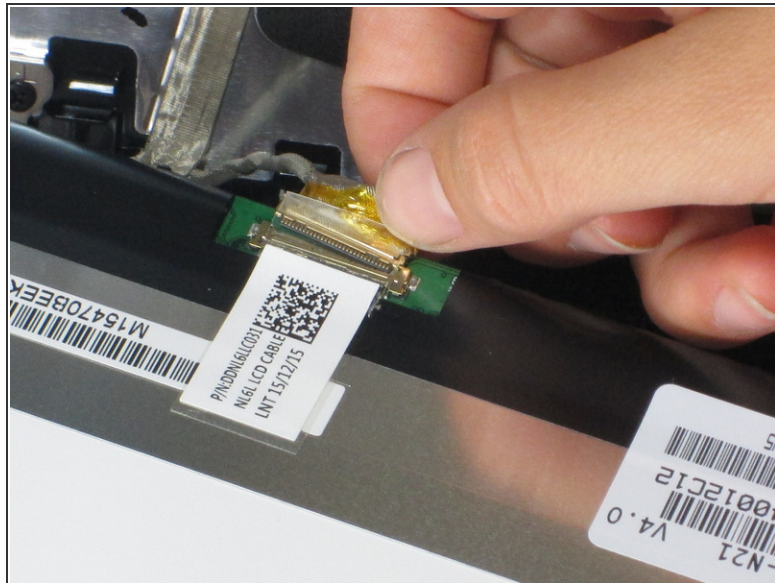
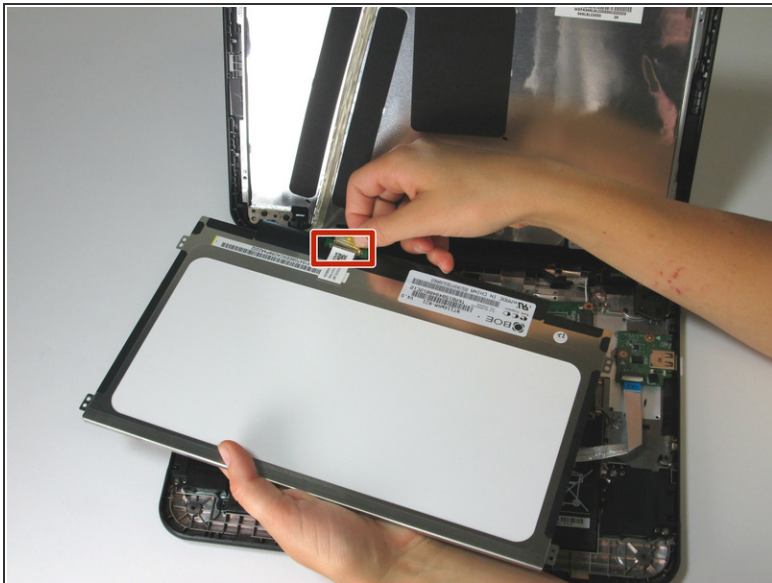
- Use a plastic opening tool to carefully pry the thin plastic frame away from the screen.
- ⓘ The bottom edge of the frame has adhesive on it, and will take a little more power to peel away. Be careful not to bend the plastic too far or it will snap.

Step 14



- Remove the four 3.0mm Phillips screws symmetrically placed on either side of the screen.

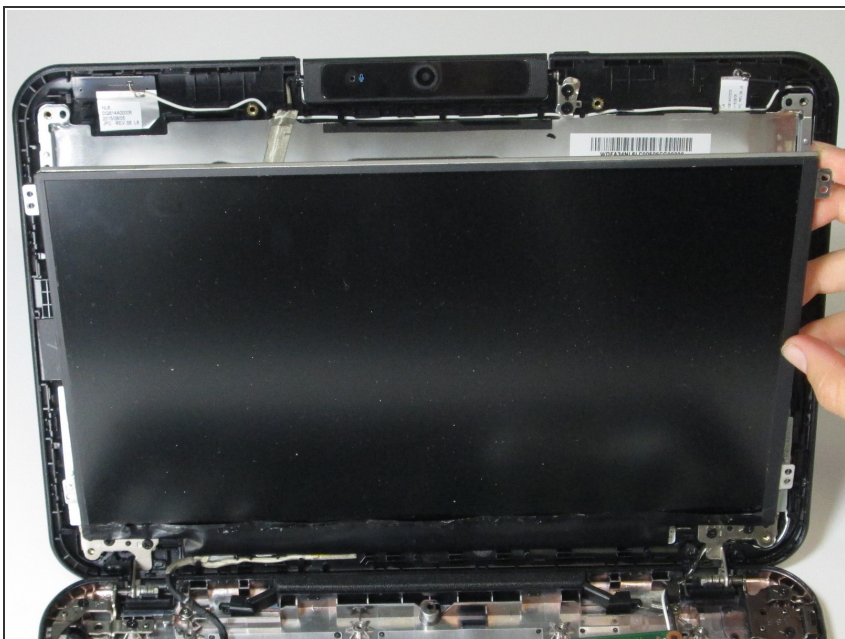
Step 15



- Pull the cable connecting the motherboard to the screen straight out from the back of the screen.

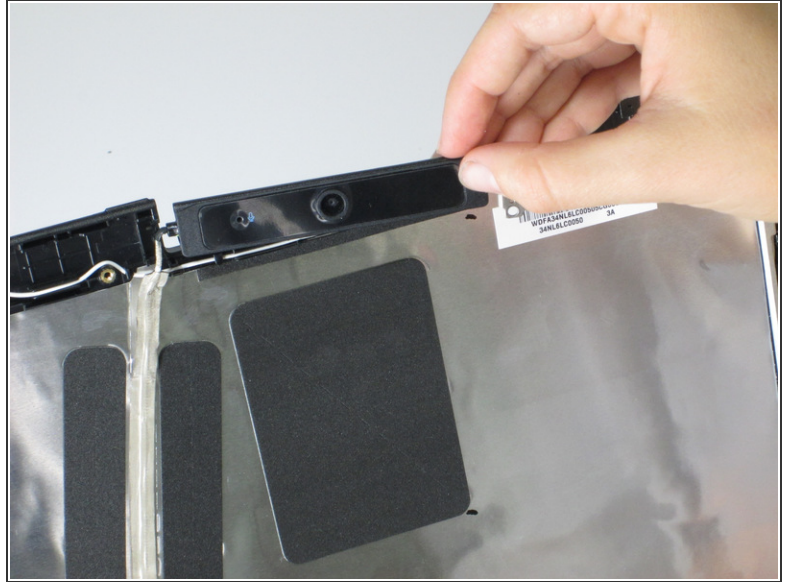
⚠ The screen is very fragile. When handling it, avoid applying uneven pressure on or bending the screen.

Step 16



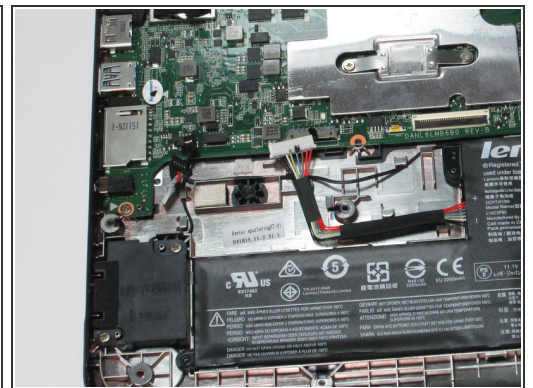
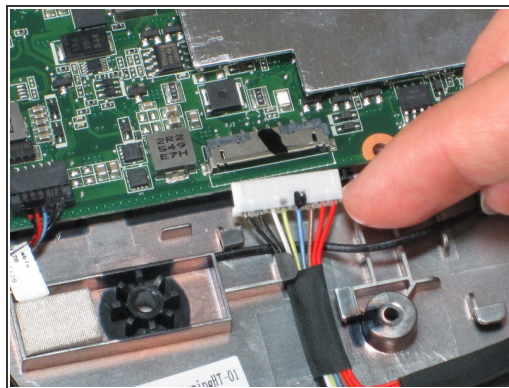
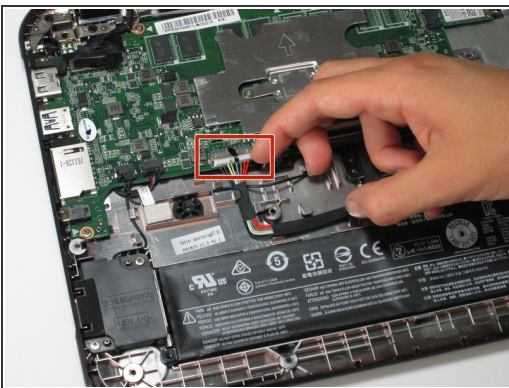
- Remove the screen from the device.

Step 17 — Motherboard and Camera



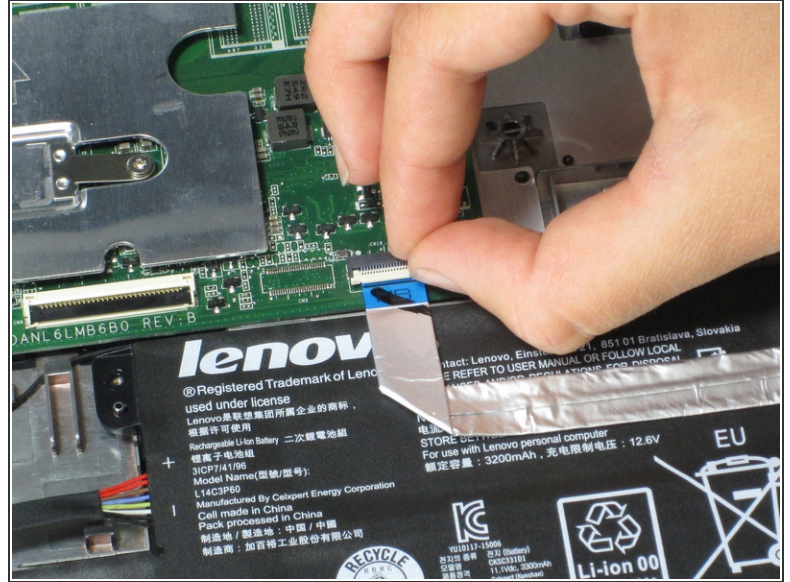
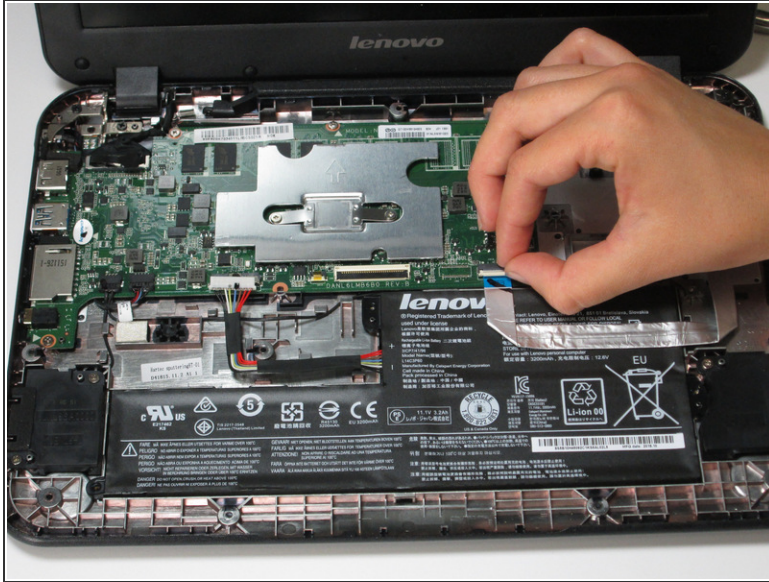
- Remove the two 4.0 mm Phillips screws from the right side of the camera.
- Once the two screws are removed, carefully pull the camera off the top of the screen.

Step 18



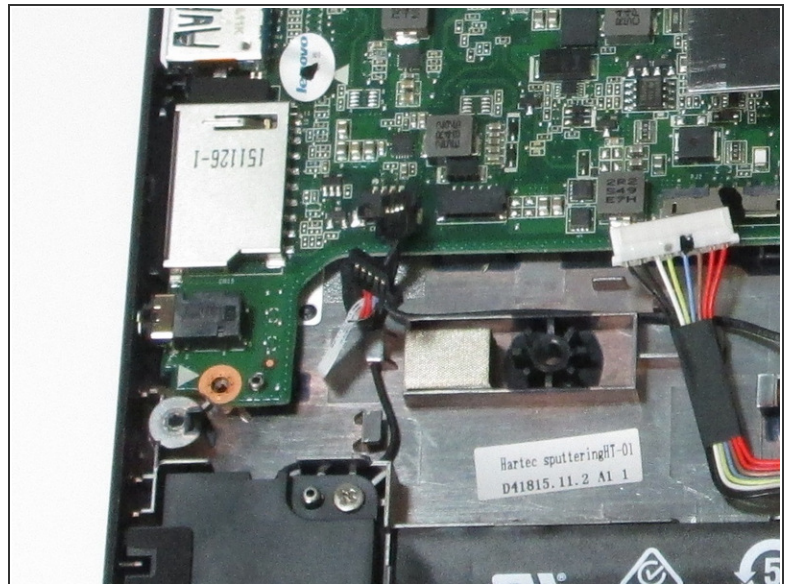
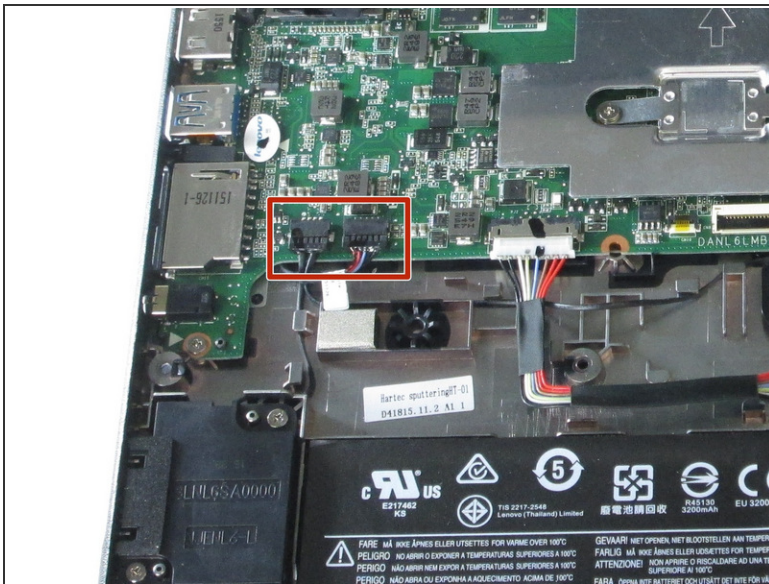
- Disconnect the battery by pulling the battery cable connector straight out.

Step 19



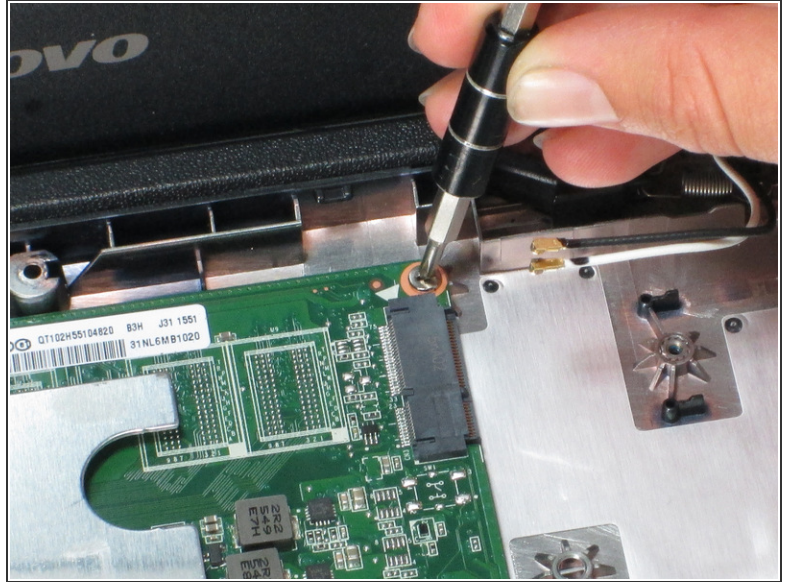
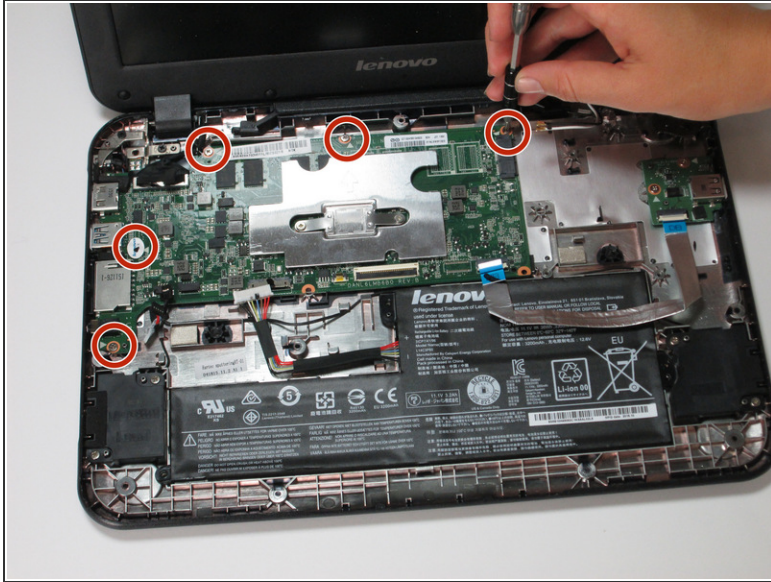
- Disconnect the USB cable from its ZIF connector by lifting up on the ZIF tab and pulling the cable straight out.

Step 20



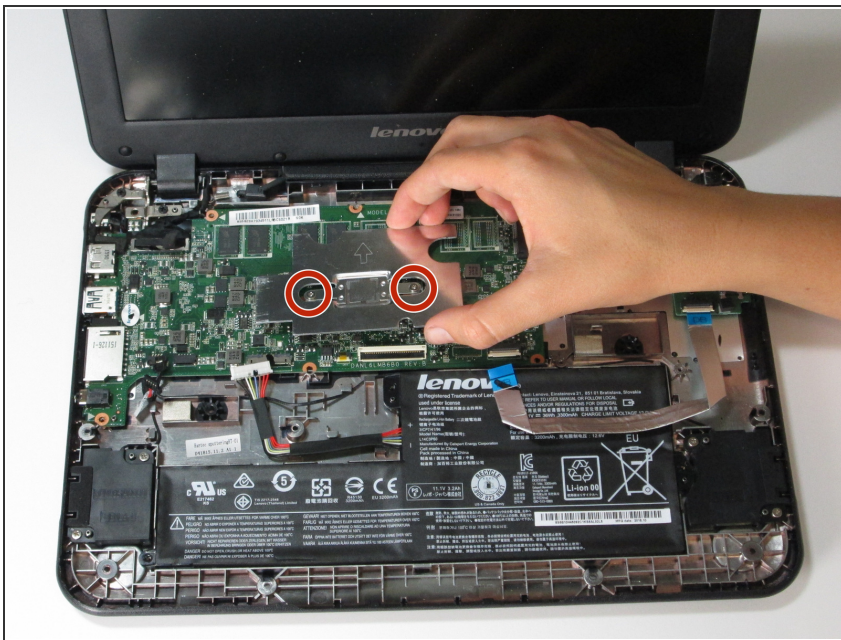
- Disconnect the speakers by pulling the two speaker cables straight out of their connectors.

Step 21



- Use a screwdriver to remove the five 3.0mm Phillips screws from the motherboard.

Step 22



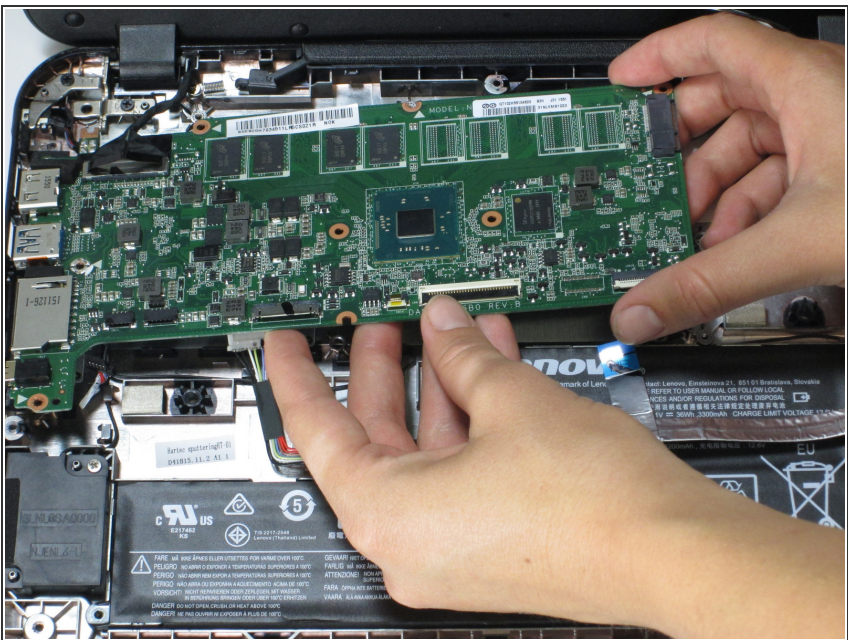
- Use a screwdriver to loosen the two screws that are attached to the CPU cover in the center of the motherboard.
- ⚠ Do not attempt to completely remove the screws from the CPU cover, just unscrew them in their place until the CPU cover can be removed.

Step 23



- Lift the CPU cover away from the CPU.
- ⚠ Do not touch the CPU itself once its metal cover is removed. The CPU is extremely delicate, and oil from fingers may damage the part.

Step 24



- The motherboard is now free from the bottom housing of the Chromebook.
- ⓘ The camera is still connected to the motherboard, so the camera needs to also be removed before the two components can be completely removed.

Step 25



- Carefully remove the camera with the motherboard by gently pulling on the wires that are adhered to the back of the screen cover.
- The motherboard and camera can now be removed from the device.

To reassemble your device, follow these instructions in reverse order.

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